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EXAMINER
HEWITT, JAMES M

INTERNATIONAL ENGINE INTELLECTUAL PROPERTY COMPANY
4201 WINFIELD ROAD
P.O. BOX 1488
WARRENVILLE, IL 60555

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/659,849	SEYMOUR ET AL.	
	Examiner	Art Unit	
	James M. Hewitt	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005 and 10 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9,11-15,17,18,20-25,27 and 28* is/are rejected.

7)☒ Claim(s) *8,10,16,19 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 June 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings were received on 6/10/05. These drawings have been entered.

The drawings are objected to because Figure 2 should include reference numerals '111' and '113, per paragraph [0016]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1-28 are objected to because of the following informalities:

In claim 1 lines 4-6, it is unclear as to how it can be said that the actuator is disposable between the rib of the male member and the female member when the male member is withdrawn from the female member. The examiner suggests inserting the word "being" before "withdrawn" in line 6.

In claim 1 lines 11-12, stating that the flange *operably engages* the first axial end of the actuator and the first axial end of the ring is awkward and confusing. The examiner suggests replacing "operably engaging" with "connecting" in line 11.

In claim 2 line 3, "aplled" should be replaced with "applied".

In claim 4 lines 1-3, stating that the first axial end of the actuator is *disposed near* a first diameter of the flange and that the first axial end of the ring is *disposed near* a second diameter of the flange is awkward, misleading and arguably inaccurate.

In claim 9 line 2, the phrase "and the female member" should be inserted after "male member".

In claim 9 line 2, the phrase "the release collar" should be inserted before "is disposed" as it is the release collar and not the actuator that is disposed on the female member when the male member and the female member are not engaged.

In claim 11 line 6, stating that the first axial end of the actuator is *disposed near* a first diameter of the flange is awkward, misleading and arguably inaccurate.

In claim 11 line 9, "being" should be inserted before "withdrawn". Refer to the objection to claim 1 lines 4-6.

In claim 11 lines 11-12, stating that the first axial end of the ring is *disposed near* a second diameter of the flange is awkward, misleading and arguably inaccurate.

In claim 18 line 2, the phrase "and the female member" should be inserted after "male member".

In claim 18 line 2, the phrase "the release collar" should be inserted before "is disposed" as it is the release collar and not the actuator that is disposed on the female member when the male member and the female member are not engaged.

In claim 21 lines 7-8, stating that the first axial end of the actuator is *disposed near* the inner diameter of the annular flange is awkward, misleading and arguably inaccurate.

In claim 21 lines 15-16, stating that the first axial end of the actuator is *disposed near* the outer diameter of the annular flange is awkward, misleading and arguably inaccurate.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Highlen (US 5,570,910).

As is evidenced in Figures 1-9, Highlen discloses all the limitations of claims 21-24. The treatment of the limitations "wherein the actuator is in closer proximity to the male member than to the female member when the male member, the female member, and the release collar are engaged" and "wherein the actuator has a thickness that is substantially less than a radial distance between an inner release surface of the female member and an outer release surface of the male member" should be explained however. Regarding the first-mentioned limitation, refer to Figure 9, wherein the actuator (36) is in contact with and thus in closer proximity to the male member than to the female member at the leading edge (38) of the actuator. Also, it stands to reason that since the release collar is affixed about the male member so as not to easily be dislodged therefrom, that the male member and the actuator are in contact about at least a portion of the inner circumference of the actuator, thus making the actuator in closer proximity to the male member than to the female member, even when the male member, female member, and collar are engaged, as in Figures 7-9. Regarding the second-mentioned limitation, from Figures 7-9, it is apparent that the radial thickness of the actuator is at the most only half as thick as the distance between an inner release surface of the female member and an outer release surface of the male member.

Regarding the limitation "wherein the second axial end comprises a lip that extends radially inward such that the release collar is retainable on the female member",

refer to Figure 1. The radially inward lip on the second axial end of the ring permits the release collar to be retained on the female member when the male member is engaged with the female member, as shown in Figure 1.

Claims 1-7, 9, 11-15, 17-18, 20-21, 23-24 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Morrison (US 5,934,709).

With respect to claim 1, Morrison discloses a release collar (33) utilizable with a coupling including a female member (3) and a male member (4), the release collar comprising: a ring (43) comprising a first axial end and a second axial end; an actuator (36) comprising a first axial end and a second axial end, wherein the actuator is disposable between a radially outermost surface of a rib of the male member and the female member when the male member is (being) withdrawn from the female member (refer to figure 3), and wherein the actuator is in closer proximity to the male member than to the female member when the male member the female member, and the release collar are engaged (when the male member, female member and collar are all engaged yet the threads 39, 40 are not yet engaged, and the inner surface of the actuator is in contact with outer surface of the male member), such that the second axial end of the actuator is radially expandable within an actuator cavity (a thread groove); a flange operably engaging the first axial end of the actuator and the first axial end of the ring.

With respect to claim 2, wherein the actuator is engagable with a locking ring (13) disposed between the male member and the female member, such that when force is

applied to the flange, the actuator is capable of dislodging the locking ring into a chamber (15) within the female member when inserted between the locking ring and the radially outermost surface of the rib.

With respect to claim 3, wherein the actuator has a thickness that is substantially less than a radial distance between an inner release surface of the female member (e.g. at the base of the recess 15) and an outer release surface of the male member (e.g. the base of the recess facing recess 15).

With respect to claim 4, wherein the first axial end of the actuator is disposed near a first diameter of the flange and wherein the first axial end of the ring is disposed near a second diameter of the flange.

With respect to claim 5, wherein a lip is disposed at the second axial end of the ring, and wherein the lip extends radially inward such that the release collar is retainable of the female member. Refer to figure 3 and col. 6 ll. 16-17.

With respect to claim 6, wherein the lip provides a seal between the release collar and the female member.

With respect to claim 7, wherein the actuator comprises a cylinder having at least one aperture.

With respect to claim 9, wherein the actuator is capable of flexing between the male member (and the female member) and (the release collar) is disposed on the female member when the male member and the female member are not engaged.

With respect to claim 11, Morrison discloses a release collar (33) utilizable with a coupling including a female member (3), a male member (4), and an actuator cavity, the

release collar comprising: a flange comprising a first diameter and a second diameter; an actuator (36) comprising a first axial end, a second axial end, and a thickness, wherein the first axial end of the actuator is disposed near the first diameter of the flange, and wherein the actuator is disposable between a rib (refer to figure 3) of the male member and the female member such that the rib of the male member is withdrawn along the actuator when the male member is (being) withdrawn from the female member; a ring (43) comprising a first axial end and a second axial end, wherein the first axial end of the ring is disposed near the second diameter of the flange.

With respect to claim 12, wherein a lip is disposed at the second axial end of the ring, and wherein the lip extends radially inward such that the release collar is retainable of the female member. Refer to figure 3 and col. 6 ll. 16-17.

With respect to claim 13, wherein the lip provides a seal between the release collar and the female member.

With respect to claim 14, wherein the flange provides a (contact) seal between the release collar and the male member.

With respect to claim 15, wherein the actuator cavity has a radial distance that is present between an inner release surface of the female member (at the base of recess 15) and an outer release surface of the male member (at the base of the recess facing recess 15), and wherein the actuator in closer proximity to the outer release surface of the male member than to the inner release surface of the female member when the male member, the female member, and the release collar are engaged.

With respect to claim 17, wherein the actuator is in closer proximity to the male member than to the female member when the male member, the female member, and the release collar are engaged, such that the second axial end of the actuator is radially expandable within the actuator cavity. Refer to the above rejection of claim 1.

With respect to claim 18, wherein the actuator is capable of flexing between the male member (and the female member) and (the release collar) is disposed on the female member when the male member and the female member are not engaged.

With respect to claim 20, wherein the actuator is engagable with a locking ring (13) disposed between the male member and the female member, such that when force is applied to the flange, the actuator is capable of dislodging the locking ring into a chamber (15) within the female member.

With respect to claim 21, Morrison discloses a release collar (33) utilizable with a coupling including a female member (3), a male member (4) and an actuator cavity (defined between female recess 15 and facing recess on the male member in figure 3) having a radial distance between an inner release surface of the female member and an outer release surface of the male member, the release collar comprising: an annular flange comprising an inner diameter and an outer diameter; an actuator (36) comprising a first axial end, a second axial end, an inner diameter, an outer diameter and a thickness, wherein the first axial end of the actuator is disposed near the inner diameter of the annular flange, wherein the thickness of the actuator is substantially less than the radial distance, wherein the actuator is disposable between the male member and the female member, and wherein the actuator is in closer proximity to the outer release

surface of the male member than to the inner release surface of the female member when the male member, the female member, and the release collar are engaged, such that the second axial end of the actuator is radially expandable within the actuator cavity; a ring comprising a first axial end, and a second axial end, wherein the first axial end of the ring is disposed near the outer diameter of the annular flange, and wherein the second axial end comprises a lip that extends radially inward such that the release collar is retainable on the female member.

With respect to claim 23, wherein the lip provides a seal between the release collar and the female member, and wherein the inner diameter of the annular flange provides a seal between the release collar and the male member.

With respect to claim 24, wherein the actuator comprises a cylinder having at least one aperture.

With respect to claim 27, wherein the actuator fits between a rib of the male member and the inner release surface of the female member so that the male member may be withdrawn from the female member. Refer to figure 3.

Claims 1-4, 7, 11, 14-15, 17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe (US 6,688,655).

With respect to claim 1, Watanabe discloses a release collar utilizable with a coupling including a female member (A) and a male member (B), the release collar comprising: a ring comprising a first axial end and a second axial end; an actuator comprising a first axial end and a second axial end, wherein the actuator is disposable

between a radially outermost surface of a rib (immediately to the right of 13b in figure 1) of the male member and the female member when the male member is (being) withdrawn from the female member, and wherein the actuator is in closer proximity to the male member than to the female member when the male member the female member, and the release collar are engaged (see figures 2 and 8, noting clearance 'S'), such that the second axial end of the actuator is radially expandable within an actuator cavity (the second axial end of the relatively thin actuator is *capable of* expanding within an actuator cavity); a flange operably engaging the first axial end of the actuator and the first axial end of the ring.

With respect to claim 2, wherein the actuator is engagable with a locking ring (3) disposed between the male member and the female member, such that when force is applied to the flange, the actuator is capable of dislodging the locking ring into a chamber (2) within the female member when inserted between the locking ring and the radially outermost surface of the rib.

With respect to claim 3, wherein the actuator has a thickness that is substantially less than a radial distance between an inner release surface of the female member and an outer release surface of the male member. Refer to figure 2.

With respect to claim 4, wherein the first axial end of the actuator is disposed near a first diameter of the flange and wherein the first axial end of the ring is disposed near a second diameter of the flange.

With respect to claim 7, wherein the actuator comprises a cylinder having at least one aperture.

With respect to claim 11, Watanabe discloses a release collar utilizable with a coupling including a female member (A), a male member (B), and an actuator cavity, the release collar comprising: a flange comprising a first diameter and a second diameter; an actuator comprising a first axial end, a second axial end, and a thickness, wherein the first axial end of the actuator is disposed near the first diameter of the flange, and wherein the actuator is disposable between a rib (immediately to the right of 13b in figure 1) of the male member and the female member such that the rib of the male member is withdrawn along the actuator when the male member is (being) withdrawn from the female member; a ring comprising a first axial end and a second axial end, wherein the first axial end of the ring is disposed near the second diameter of the flange.

With respect to claim 14, wherein the flange provides a (contact) seal between the release collar and the male member.

With respect to claim 15, wherein the actuator cavity has a radial distance that is present between an inner release surface of the female member and an outer release surface of the male member, and wherein the actuator in closer proximity to the outer release surface of the male member than to the inner release surface of the female member when the male member, the female member, and the release collar are engaged. Refer to figures 2 and 8, noting clearance 'S'.

With respect to claim 17, wherein the actuator is in closer proximity to the male member than to the female member when the male member, the female member, and

the release collar are engaged, such that the second axial end of the actuator is radially expandable within the actuator cavity. Refer to figures 2 and 8, noting clearance 'S'.

With respect to claim 20, wherein the actuator is engagable with a locking ring (3) disposed between the male member and the female member, such that when force is applied to the flange, the actuator is capable of dislodging the locking ring Into a chamber (2) within the female member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Highlen (US 5,570,910) in view of Karl et al (US 5,553,895).

Highlen teaches all the limitations of claims 25 and 28, except that the actuator comprises a plurality of fingers. In Figure 5, Highlen shows that his actuator includes a slot. Karl et al teaches a similar coupling assembly comprising a release collar having an actuator comprising a plurality of fingers defined by slots (37), as shown in Figure 6. In view of Karl et al's teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Highlen's actuator with a number of slot to define a plurality of fingers in order to enhance the resiliency of the actuator.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morrison US 5,934,709) in view of Highlen (US 5,570,910).

Morrison fails to teach the release collar as claimed in claim 22. Highlen teaches a similar device employing a release collar meeting the limitations of claim 22. In view of Highlen's teaching, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify or replace Morrison's collar with that of Highlen in order to provide an effective alternative release collar.

Allowable Subject Matter

Claims 8, 10, 16, 19 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Note that the allowability of the above claims is also contingent upon overcoming the above-noted objections (see ***Claim Objections*** above).

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9, 11-15, 17-18, 20-24 and 27 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments with respect to the 102(b) rejection of claim 21 by Highlen and the 103(a) rejection by Highlen in view of Karl et al have been fully considered but they are not persuasive. Applicant asserts "Highlen does not describe that the release collaris retainable on the female member. The examiner disagrees. The radially inward

lip on the second axial end of Higlen's ring permits the release collar to be retained on the female member when the male member is engaged with the female member, as shown in Figure 1.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAMES M. HEWITT
PRIMARY EXAMINER